PRESS RELEASE

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For More Information Contact:
Tom Carpenter, 206-419-5829
tomc@hanfordchallenge.org

Elevated Radiation Indicator of Second Double-Shell Tank Failure at Hanford Nuclear Site

Plutonium, Cesium-137 Levels Detected in AY-101 Outer Shell

Seattle, WA: Hanford Challenge today alleged that a second high-level nuclear waste tank at the Hanford nuclear site may have failed.

The group, citing sources inside Hanford, says that above-background levels of Cesium-137, plutonium and a high-beta emitter (likely Strontium-90) all radioactive by-products commonly found in Hanford tanks, were recently measured outside of the primary liner in Tank AY-101, one of the first of the 28 double-shelled tanks built at Hanford about 40 years ago. Those measurements were confirmed to a high degree of certainty, according to Hanford sources.

"The presence of these radioactive materials in the outer shell of the tank, known as the annulus, is a solid indicator that the primary shell of the tank has failed and is leaking high-level nuclear waste into the outer shell. This is the same indicator that tipped off workers that AY-102 had failed," said Mike Geffre, an Instrument Technician who worked at Hanford who first discovered and disclosed the AY-102 leak.

The failure of a second double-shell tank at Hanford has very serious implications for the future: "Simply put, Hanford is nearly out of double-shell tank space, especially after pumping out AY-102 and emptying some of the shakier single-shell tanks," said Tom Carpenter, Executive Director for Hanford Challenge. "There is no other realistic option but to begin building new tanks immediately." The construction of new tanks may take from 5 to 7 years.

Tank AY-101 began operations in April 1971. It currently contains about 578,000 gallons of high-level waste. According to a Hanford report, corrosion was first observed in AY-101 in 1992, when video inspections in the annulus showed rust on areas of the primary tank and secondary liner walls. Further video inspection in January and February 2001 showed extensive

corrosion on the walls of the annulus and the interior of primary tank. The video also showed a stain pattern that suggested a leakage of water through the primary tank wall from the annulus.

More recently, in January 2013, the U.S. Department of Energy (DOE) announced that it had inspected AY-101 tank and found that there was no leak at that time. That inspection occurred because of the acknowledged failure of AY-102.

A Government Accountability Office (GAO, 15-40) report in 2014 found that, "DOE officials and members of a 2014 expert panel convened to examine the integrity of the DSTs [double-shell tanks] have said that corrosion is a threat to DST integrity, and, according to the panel, that there are deficiencies in DOE's understanding of corrosion in all of the DSTs . . . DOE reported that at least 12 of the other 27 DSTs have similar construction flaws." GAO, Id. At 14.

On Monday, April 18, 2016, King 5 News in Seattle reported that liquid levels of high-level waste in the outer shell of Tank AY-102 suddenly increased by thousands of gallons over the weekend. Approximately three to five thousand gallons of liquid waste ended up in the outer shell.

Background:

The Hanford nuclear site is the most contaminated facility in North America, storing two-thirds of the nation's high-level nuclear waste. Hanford was built during World War II to produce the plutonium for the atomic bomb dropped on Nagasaki. Hanford went on to create the plutonium for much of the US nuclear arsenal, leaving behind a complicated, dangerous and expensive legacy of radioactive waste.

The AY tanks are just 2 of the 177 underground nuclear waste tanks containing an estimated 56 million gallons of high-level nuclear waste. 67 single-shell tanks have leaked over one million gallons to the soil and groundwater. The double-shell waste tanks were built to be the safeguard against new single-shell tank leaks, and, until AY-102 failed, were previously considered to be stable and non- leaking. Double-shelled tanks have two steel walls, with a "tank within a tank" design that adds to the safety margin.

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